Subject index

Aharonov–Bohm effect 57, 147

Chaos 43, 204
Charge relaxation 218
Charging effects 111
Charging effects, single electron 157
Co-tunneling 88, 241
Collective modes 258, 266
Conductance peaks, periodic 1, 43, 80, 99
Conductors, one-dimensional 258, 266
Correlation 1, 27
Coulomb blockade 27, 34, 57, 70, 80, 88, 99, 117, 142, 147, 157, 210, 218, 241, 250, 266
Coupling, of localized defect and discrete quantum states 235

Dielectric constant, reduction of 235
Dissipation 189

Edge channels 80
Edge transport 250
Electron gas, one-dimensional 250
Electron states, in low-dimensional structures 16
Electron systems, low-dimensional 165
Exchange effects 176
Excitations, collective 16
Excitons 34

Fluctuations 43, 225

Hartree–Fock approximation 6

Interference, mesoscopic 57

Kohn's theorem, generalized 6
Kondo effect 1

Landauer-type formula 1
Luttinger liquid 250

Magnetic levels 111
Magnetism 189
Magnetotransport 135
Magnetotunneling 27
Many-body theory 176
Matrix techniques, random 43

Parabolic confinement 6
Paramagnetism, orbital 204
Parity effect 210
Photon echo 176
Point contact 225

Quantization effects 225
Quantum adiabatic transport 80
Quantum confinement 125
Quantum confinement, three-dimensional 235
Quantum dot 27, 34, 70, 111, 117, 135, 142, 147, 204
Quantum dot, array 43, 157
Quantum dot, helium 6
Quantum dot, lateral 88
Quantum dot, semiconductor 176
Quantum Hall effect 70, 99, 157
Quantum Hall effect, fractional 1, 99, 142, 147
Quantum tunneling 189
Quantum wells, semiconductor 176

Scanning tunneling microscopy 218
Scattering 258
Scattering, by phonons, magnons and other nonlocalized excitations 16
Semiconductor nanostructures 88
Semiconductors 165
Single electron effects 125
Spectroscopy, infrared 6
Spectroscopy, capacitance 117
Spectroscopy, far-infrared 165
Superconductivity 210, 225

Tunnel junction 57, 210, 218
Tunneling 27, 250, 258, 266
Tunneling, general 16
Tunneling, resonant 88, 125, 135, 235, 250

Valence band coupling 176

Wigner lattice 241